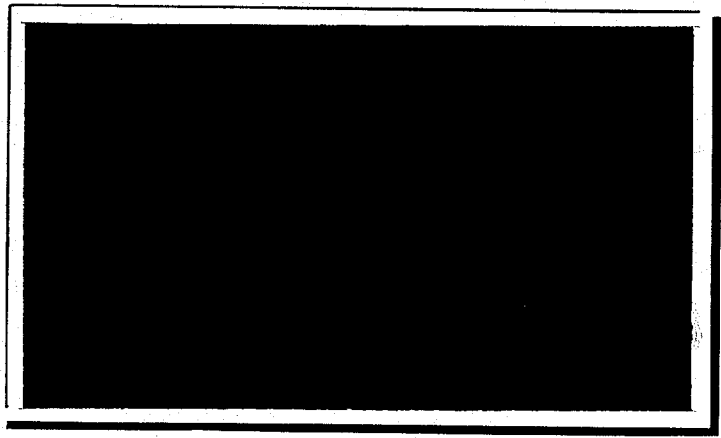


18265

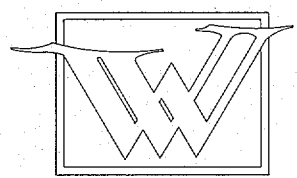
MICHIGAN  
OCZM GRANT #NA-80-AA-H-CZ157  
SUBTASK 3D-10.2  
(Part 2 of 4)



Michigan, Department of Natural Resources - C2M Program  
p.

HT  
393  
.M52  
F73  
1981  
pt.2

**WILLIAMS & WORKS**  
ENGINEERS/PLANNERS/ARCHITECTS  
GRAND RAPIDS, MICHIGAN 49506



Michigan, Department of Natural Resources C2M Program U.P.

HT393, MS2 F-73 1981 pt.2

DEC 17 1987

FRANKFORT COASTAL ZONE  
MANAGEMENT PLAN

SITE INVENTORY

PART II

U. S. DEPARTMENT OF COMMERCE NOAA  
COASTAL SERVICES CENTER  
2234 SOUTH HOFFMAN AVENUE  
CHARLESTON, SC 29405-2413

Property of CSC Library

This document was prepared in part  
through financial assistance provided by  
the Coastal Zone Management Act of 1972  
administered by the Office of Coastal Zone Management  
National Oceanic and Atmospheric Administration

Prepared for:

The City of Frankfort  
412 Main Street  
Frankfort, Michigan 49635

Prepared by:

Williams & Works  
611 Cascade West Parkway, S.E.  
Grand Rapids, Michigan 49506

## SITE INVENTORY

### INTRODUCTION

This section presents the site inventory for the Betsie Lake inventory for the Betsie Lake Waterfront Park and Lake Michigan Beach. The Betsie Lake waterfront includes the Mineral Spring Park, the C.S. Kibbey Memorial Boat Launch, and the U.S. Army Corps of Engineers - Confined Disposal Facility Site - the Betsie Lake Waterfront and Lake Michigan Beach are shown in Figure 10. Following the site inventories are photos of the sites.

SITE INVENTORY: Betsie Lake Waterfront  
Frankfort, Michigan

1. MAN-MADE ELEMENTS

- a. Boundaries and Easements  
As shown in Figure 10.
- b. Buildings and Structures (including historical and archeological significance) As detailed in Table 22, Page 44.  
Mineral Spring Park: Picnic and playground facilities, Mineral Spring City Marina and Charter Fishing Boats.  
C.S. Kibbey Memorial Boat Launch: Boat launching and parking facilities.  
Confined Disposal Facility Site: Unimproved and disturbed open space.  
Other Facilities: Frankfort public library and the Frankfort Chamber of Commerce.
- c. Roads and Walks - Main Street runs parallel to this site. It provides direct and indirect access. Pedistrian access and internal circulation is excellent.
- d. Utilities - Water, sewer, gas, electric, and telephone are available to the site.
- e. Land Uses - The site fronts on the Main Street commercial district. The eastern end abutts the industrial district.
- f. Codes and Ordinances - Frankfort Building Code and Zoning Ordinance. Parts of the site are zoned C-3, Commercial Waterfront, and parts of the site are zoned P-1, Public Lands. Commercial Waterfront uses are subject to special use approval. It is intended for water/retail oriented uses, such as marinas, restaurants, motels, and retail specialty shops. Public lands are intended for recreation, open space, and governmental facilities.

2. NATURAL ELEMENTS

- a. Topography - The site slopes from Main Street to the lake with a total change in elevation of about 20 feet. The slopes are steepest near Main Street and flat near the lake.

## Betsie Lake Waterfront

- b. Soils - In general, many of the soils are man-made and fill material.
- c. Water Bodies; Habits - Betsie Lake water levels are dependent upon Lake Michigan and the Betsie River flow. The shoreline features are unrelated to current actions. See also: Lake Hydrology, page 7.
- d. Subsurface Geology - Bedrock in the area lies between 450 and 550 feet below the surface.
- e. Vegetation - On-site vegetation is ornamental or disturbed natural remnants. Mineral Spring Park has some mature hardwood trees in the upland areas.
- f. Wildlife - No significant wildlife has been documented on-site.

## 3. PERCEPTUAL CHARACTERISTICS

- a. Views - The site provides an excellent view up the lake towards the Betsie Creek. It provides an interesting view of the car-ferry terminal directly across the lake. A view of Lake Michigan is blocked by various structures and a slight ridge near 2nd Street.
- b. Smells and Sounds - On-site smells and sounds generally are associated with the car-ferry or construction vessels. Some smells and sounds may be produced by the charter fishing fleet. On-site smells and sounds are neither obnoxious nor unique.
- c. Spatial Patterns - The waterfront is fractured by the undeveloped area of the confined disposal facility (CDF). The boat launch facility is located behind the wastewater treatment plant. The Mineral Spring Park is a disjointed combination of old and new facilities. The CDF will disrupt recreational activities if not buffered.
- d. Forms, Textures, and Scales - The waterfront park has a linear form between Main Street and Betsie Lake. It is comfortably human scaled, however, the height of the CDF may dominate the site when it is built.
- e. General Impressions - The Waterfront Park presents many development opportunities.

SITE INVENTORY: Lake Michigan Beach  
Frankfort, Michigan

1. MAN-MADE ELEMENTS

- a. Boundaries and Easements - As shown on Figure 10.
- b. Buildings and Structures (including historical and archeological significance) - Breakwater, parking lot, playground equipment.
- c. Roads and Walks - Vehicular access is from Main Street and 2nd Street.
- d. Utilities - Water, sewer, gas, electric, and telephone are available to the site.
- e. Land Uses -
  - North: residential
  - East: commercial
  - South: commercial (vacant) and governmental (U.S. Coast Guard)
  - West: Lake Michigan
- f. Codes and Ordinances: Frankfort Building Codes and Zoning Ordinance. It is zoned CEHRE-1 (critical environmental or high risk erosion). Public parks are a permitted use. All structures must have a 200 ft setback from the shoreline.

2. NATURAL ELEMENTS

- a. Topography - The topography varies from about 580 (Lake Michigan) to 594 feet. The topography is shaped by wind erosion and planned communities.
- b. Soils - Beach sand.
- c. Water Bodies; Habits - The shoreline within the breakwaters is stable. See Lake Michigan Erosion, Page 7.
- d. Subsurface Geology - Bedrock in the area lies between 450 and 550 feet below the surface.
- e. Vegetation - On-site vegetation is mainly beach grasses.

## Lake Michigan Beach

- f. Wildlife - No significant wildlife has been documented on-site.

### 3. PERCEPTUAL CHARACTERISTICS

- a. Views - The site provides an excellent view of the lake, the harbor entrance, and the shoreline.
- b. Smells and Sounds - No unusual smells or sounds impact the site.
- c. Spatial Patterns - The site is focused toward the lake.
- d. Forms, Textures, and Scales - The sand and water, through changing wind and weather conditions, define the site texture. On-site forms are shaped by the wind.
- e. General Impressions - The beach is clean and attractive. It is well used and sometimes there is not enough parking. The beach has minimal site furnishings.

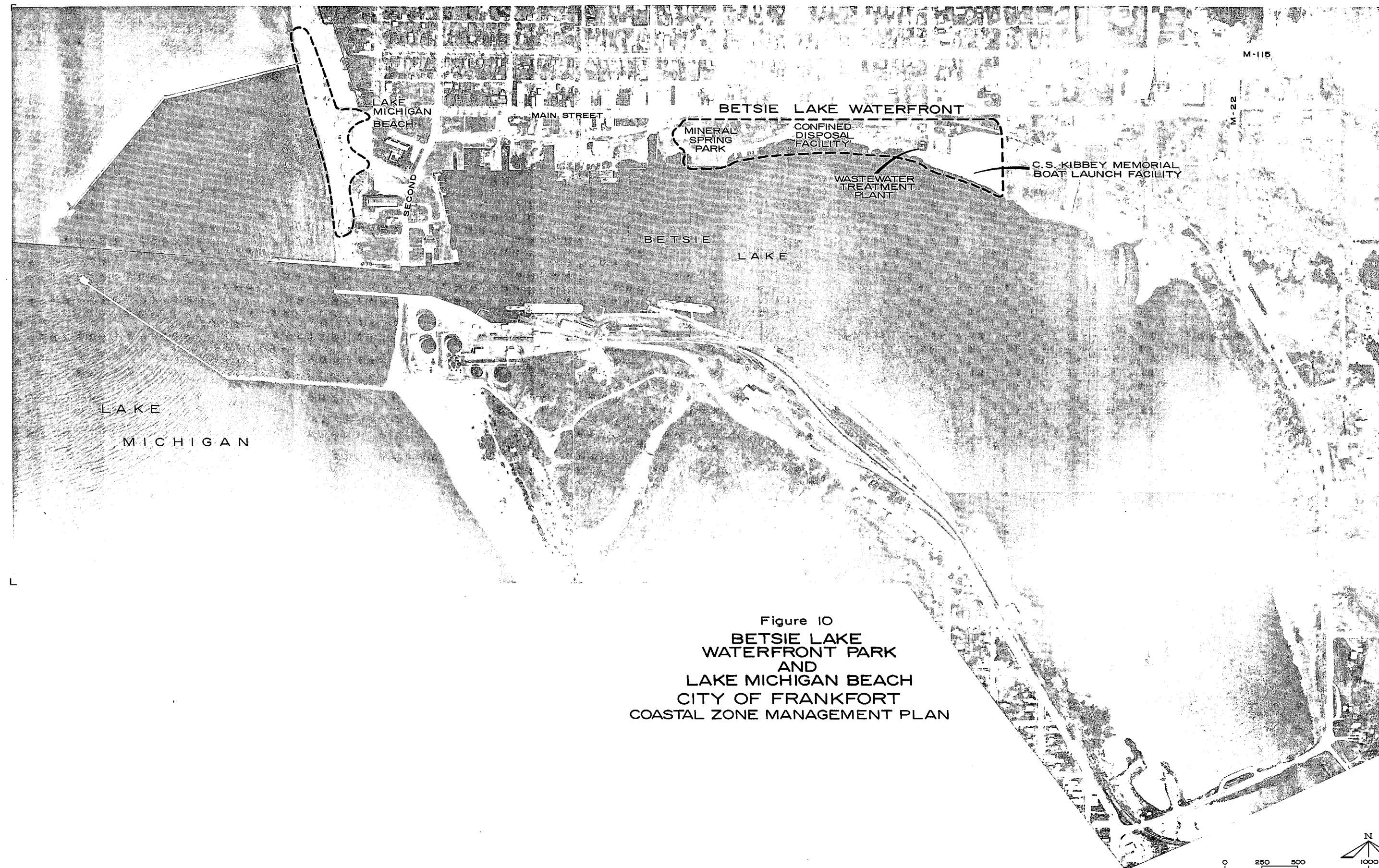
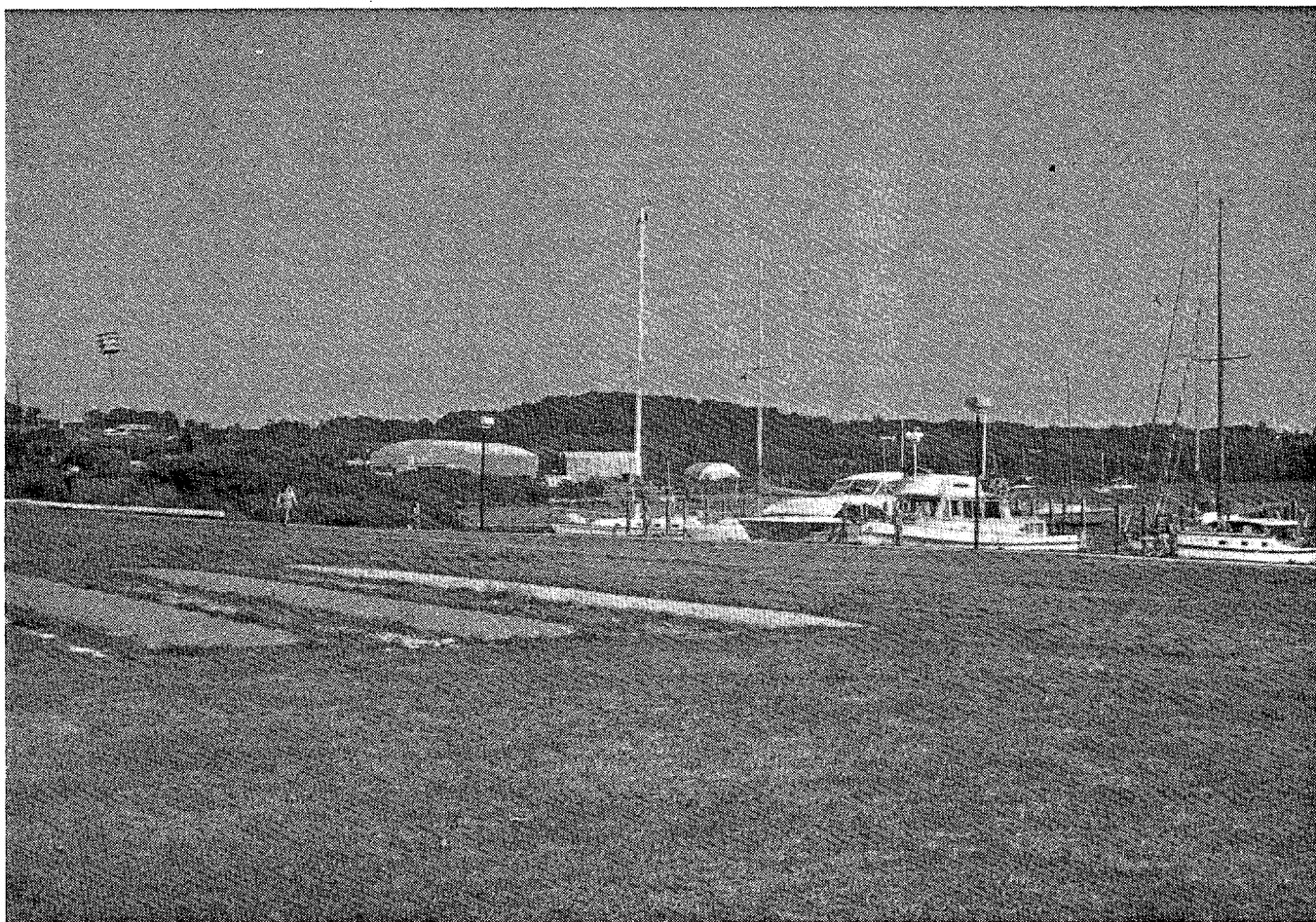


Figure 10  
 BETSIE LAKE  
 WATERFRONT PARK  
 AND  
 LAKE MICHIGAN BEACH  
 CITY OF FRANKFORT  
 COASTAL ZONE MANAGEMENT PLAN

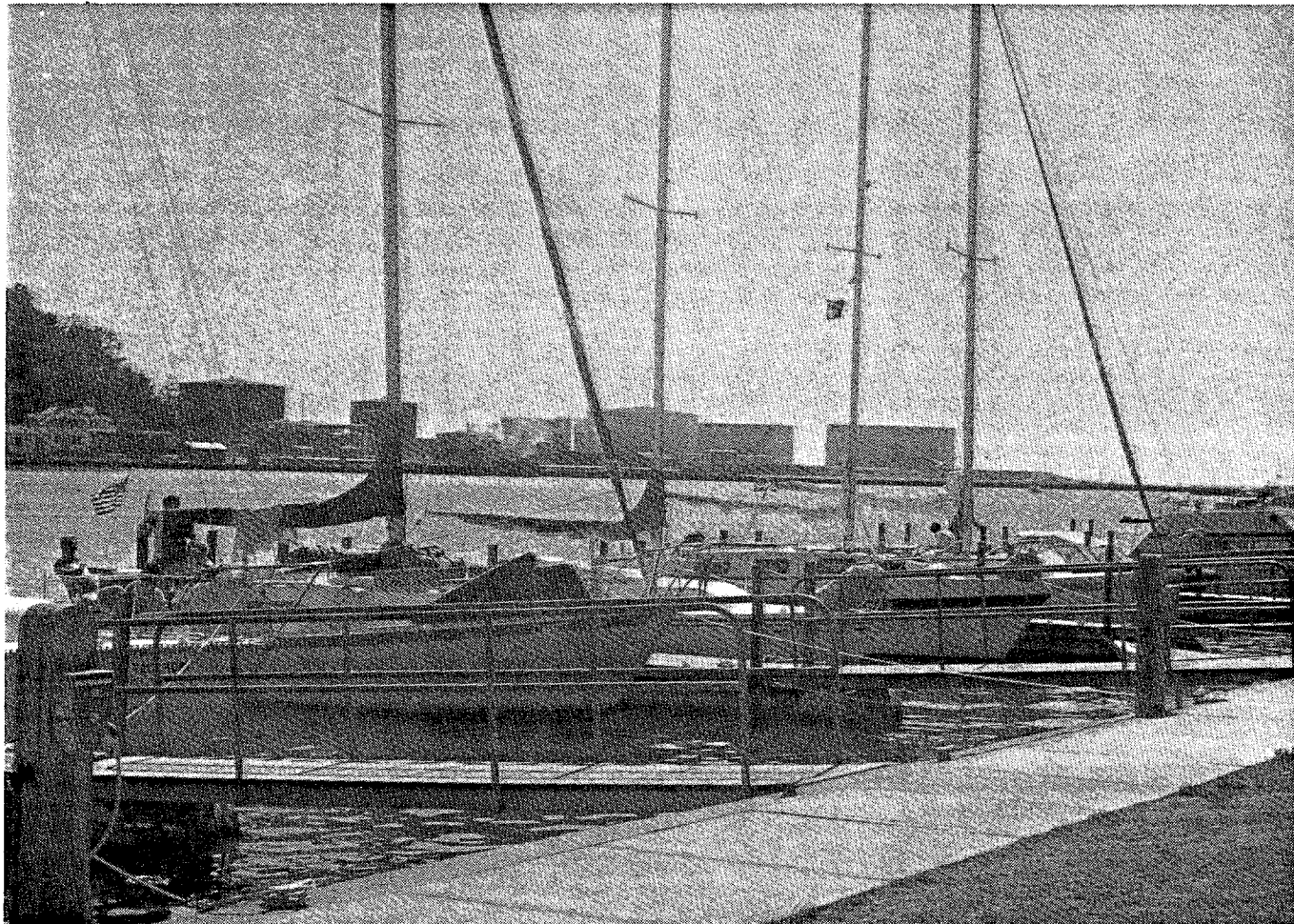




Above: Shuffle Board Courts at Mineral Spring Park  
Below: New Play Ground Equipment at Mineral Spring Park

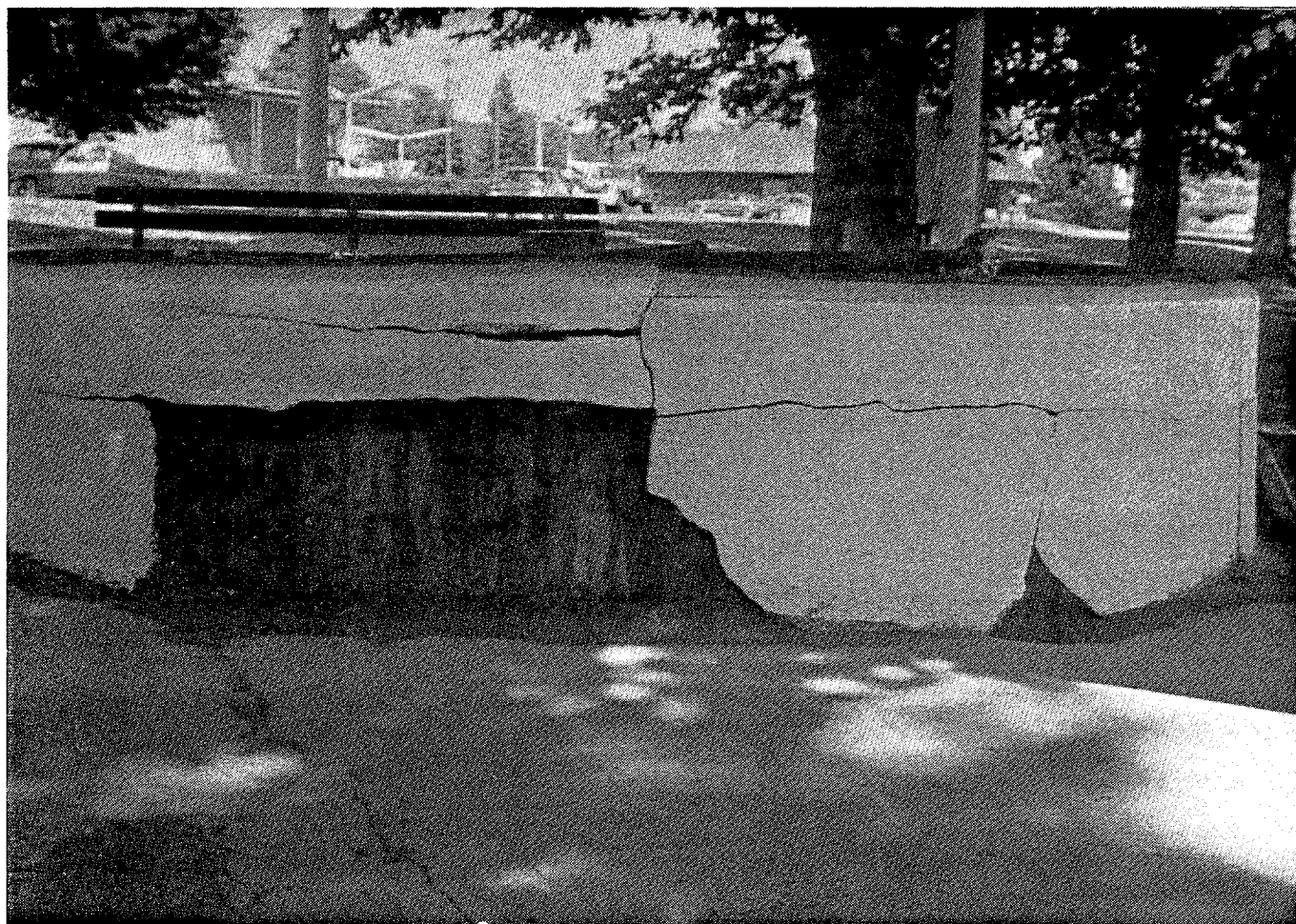




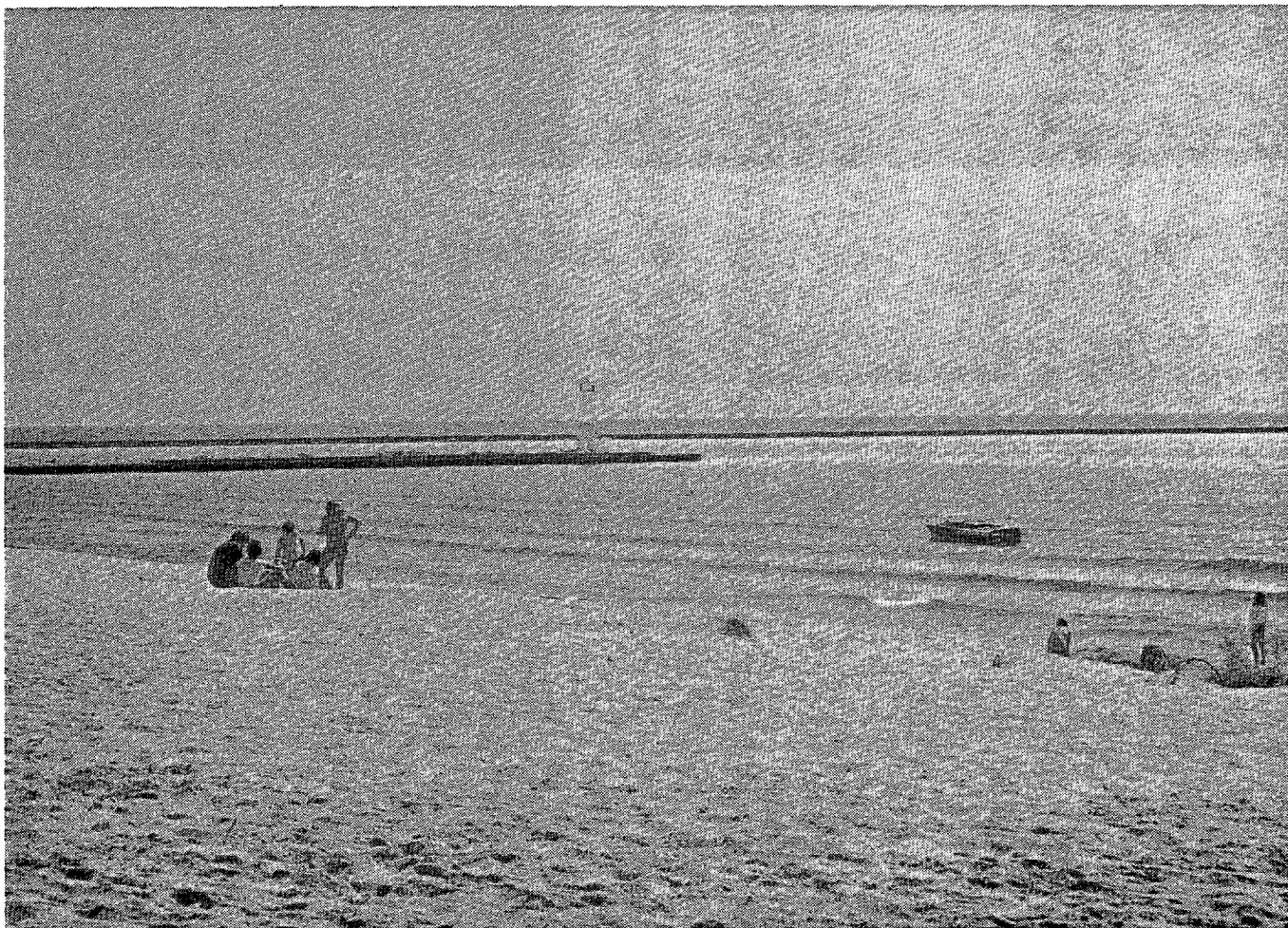


Above: Municipal Marina

Below: Deterioration of the Mineral Spring Facility







Above: Lake Michigan Beach

Below: Dune Erosion, Lake Michigan Beach







Above: C.S. Kibbey Memorial Boat Launch

Below: Cannon Park

